

In the Claims:

Please amend the claims as follows:

1. (currently amended) A wireless controller for at least one of controlling and/or or monitoring ~~a device arranged relative~~ a tool operatively connected to an industrial robot, the controller comprising:

a wireless communication module ~~means including a processor arranged with~~ operatively connected to the tool and comprising a processor having a communication function ~~means for handling~~ module configured to handle wireless communication to and from said ~~device~~ tool, and a control unit configured to carry ~~means for carrying~~ out at least one control function for one or more actuators of said ~~device~~ tool; and

a supervisory controller physically separate from the industrial robot and configured to wirelessly send signals to the wireless communication module to control operation of the tool.

2. (currently amended) The wireless controller according to claim 1, wherein the control unit comprises at least one ~~means are comprised in part as one or more computer programs~~ program executable by ~~means of~~ said processor ~~that handles~~ configured to handle the wireless communication ~~functions~~.

3. (currently amended) The wireless controller according to claim 1, wherein the control unit configured ~~means~~ is further ~~arranged~~ to process a signal from at least one sensor ~~arranged with said device~~ operatively connected to the tool.

4. (currently amended) The wireless controller according to claim 1, ~~wherein it comprises~~ further comprising:

a configurable hardware ~~I/O~~ input/output interface.

5. (currently amended) The wireless controller according to claim 4, wherein the hardware input/output interface is ~~means of the wireless controller are~~ integrated in the same one unit as with said processor.

6. (currently amended) The wireless controller according to claim 1, wherein the control unit means further comprises a program ~~means for receiving and/or storing~~ configured to carry out at least one of receiving or storing operational data of said ~~device~~ tool.

7. (currently amended) The wireless controller according to claim 6, ~~wherein the wireless controller comprises~~ further comprising:

a memory ~~means for storage of~~ configured to store operational data.

8. (currently amended) The wireless controller according to claim 6, wherein the control unit means further comprises a computer program ~~means for processing~~ configured to process the operational data of said ~~device~~ tool.

9. (currently amended) The wireless controller according to claim 6, wherein the control unit means further comprises an output ~~means for communicating~~ configured to communicate

data dependent on the stored operational data to a display ~~means~~.

10. (currently amended) The wireless controller according to claim 6, wherein the output ~~means for communicating~~ configured to communicate the stored operational data comprises an embedded web server.

11. (currently amended) The wireless controller according to claim 9, wherein the output ~~means~~ of the control unit ~~means~~ is configured to communicate the stored operational data via the wireless communication ~~means~~ module.

12. (currently amended) The wireless controller according to claim 9, wherein the output ~~means~~ of the control unit ~~is means may be~~ configured to communicate with a supervisory robot control system using a message sent via any of the list of: SMS, a web address, a phone, a second robot control unit.

13. (currently amended) The wireless controller according to claim 9, wherein the output ~~means~~ of the control unit ~~means~~ is configured to send a communication to a human operator via any of a list of: SMS, a web address, a network address, a phone, a control unit.

14. (currently amended) The wireless controller according to claim 1, wherein the control unit ~~means~~ further comprises a control loop ~~for receiving~~ configured to receive an input signal from a high level control system and ~~generating~~ to generate a control signal to said ~~device~~ tool dependent on the input signal from the high level control system.

15. (currently amended) The wireless controller according to claim 14, wherein input/output signals of the control loop of the control unit ~~means~~ are compatible with a high level language.

16. (currently amended) The wireless controller according to claim 6, ~~wherein the wireless controller comprises~~ further comprising:

an additional processor means for receiving and/or storing configured to carry out at least one of receiving and storing operational data of said ~~device~~ tool.

17. (currently amended) The wireless controller according to claim 1, ~~further comprising~~ wherein the wireless communication ~~means~~ module is configured to operate ~~according to~~ compatible with a standard ~~compatible~~ issued by the Bluetooth SIG Inc.

18. (currently amended) The wireless controller according to claim 17, wherein the wireless communication ~~functions means~~ module comprises protocol stack handling for both incoming and outgoing communications.

19. (currently amended) The wireless controller according to claim 17, wherein ~~handling~~ wireless communication is transmitted according to a protocol that emulates a serial transmission line.

20. (currently amended) The wireless controller according to claim 1, further

comprising:

a wireless input/output module configured to provide means for providing wireless I/O functions between the robot control unit and said ~~device~~ tool, wherein the wireless input/output module is arranged on or in relative proximity to the industrial robot.

21. (currently amended) A method for wireless at least one of control and/or or monitoring of a ~~device arranged relative~~ tool operatively connected to an industrial robot, the method comprising:

sending a wireless signal from a supervisory controller physically separate from the industrial robot to a wireless communication module of a wireless controller operatively connected ~~robot control unit to said device mounted on or arranged in conjunction with said robot~~ tool and configured to control operation of the tool,

receiving the signal ~~by means of a~~ with the ~~wireless controller arranged mounted on or in conjunction with said device~~ communication module,

processing the wireless signal in a processor of a control unit operatively connected to ~~of the wireless controller~~ communication module, and

generating a second control signal in the processor and sending it the second control signal to said ~~device~~ tool.

22. (currently amended) The method according to claim 21, further comprising

sending the second control signal ~~by means of~~ with a hardware I/O input/output interface of the wireless controller.

23. (currently amended) The method according to claim 21, further comprising storing operational data for said ~~device~~ tool in a memory ~~means~~ of the wireless controller.
24. (currently amended) The method according to claim 21, further comprising storing an in-signal and a result signal ~~in signals and result signals~~ sent out in a memory ~~means~~ of the wireless controller.
25. (currently amended) The method according to claim 21, further comprising processing operational data and providing₂ for a web client or a thin client₂ data comprising any from the list of: signals, results, number of complete cycles, cycle time, statistical information, alarms.
26. (currently amended) The method according to claim 21, further comprising providing operational data for a display ~~means~~.
27. (currently amended) The method according to claim 21, further comprising providing diagnostic information based on ~~the~~ an operational data.
28. (currently amended) The method according to claim 27, further comprising: providing the diagnostic information arranged compatible with a web client or a thin client.
29. (currently amended) The method according to claim 28, further comprising:

providing the diagnostic information arranged compatible with a web browser or telephone adapted web browser format including from the list of : XML, HTML, WML, WBXML.

30. (currently amended) The method according to claim 27, further comprising:
providing the diagnostic information arranged compatible with a Java applet.

31. (currently amended) The method according to claim 21, further comprising:
downloading operational information and/or configuration data stored in the wireless controller to at least one of a second wireless controller ~~and/or~~ or a second device tool neither of which are mounted on the robot.

32. (currently amended) The method according to claim 21, further comprising:
providing wireless I/O functions between the robot control system and the ~~device~~ tool arranged on or in relative proximity to the industrial robot.

33. (currently amended) The method according to claim 21, wherein the method carries out at least one of controlling and monitoring a tool ~~Use of a device according to claim 1 to control and/or monitor a device~~ arranged with an industrial robot to carry out the operation of any one from the list of: welding, soldering, riveting, painting, gluing, folding plate, bending plate, hemming plate, gripping an object, manipulating an object.

34. (currently amended) The method according to claim 21, wherein the method carries

~~out at least one of configuring and calibrating Use of a device according to claim 1 to configure and/or calibrate a second wireless controller and/or a second device tool prior till to use with a robot.~~

35. (currently amended) The method according to claim 21, wherein the Use of a wireless controller according to claim 1 by is operated by a human operator to carry out at least one of controlling and monitoring the tool control and/or monitor a device arranged with an industrial robot.

36. (currently amended) The method according to claim 21, wherein the Use of a wireless controller according to claim 1 by means of comprises a process running on one or more computers to carry out at least one of supervising and controlling the tool supervise and/or control a device arranged with an industrial robot.

37. (currently amended) A computer program product, comprising:
a computer readable medium; and
computer code means and/or software code portions recorded on the computer readable medium for making a computer or processor perform ~~the steps of a method according to claim 21~~
a method for wireless at least one of control or monitoring of a tool operatively connected to an industrial robot, the method comprising

sending a wireless signal from a supervisory controller physically separate from the industrial robot to a wireless communication module of a wireless controller operatively connected robot control unit to said device mounted on or arranged in conjunction with said

~~robot~~ tool and configured to control operation of the tool,

receiving the signal ~~by means of a~~ with the wireless controller ~~arranged mounted on or in~~
~~conjunction with said device~~ communication module,

processing the wireless signal in a processor of a control unit operatively connected to ~~of~~
the wireless controller communication module, and

generating a second control signal in the processor and sending it the second control
signal to said ~~device~~ tool.

38. (cancelled)

39. (currently amended) A graphical user interface for carrying out at least one of
controlling ~~and/or~~ or monitoring and a ~~device~~ tool operatively connected to ~~arranged relative an~~
industrial robot, ~~wherein~~ comprising:

a display ~~for~~ of operational data of ~~the device~~ is the tool provided by a wireless controller
~~according to claim 1~~ comprising a wireless communication module operatively connected to the
tool and comprising a processor having a communication function module configured to handle
wireless communication to and from said tool, and a control unit configured to carry out at least
one control function for one or more actuators of said tool, and a supervisory controller
physically separate from the industrial robot and configured to wirelessly send signals to the
wireless communication module to control operation of the tool.

40. (currently amended) The graphical user interface according to claim 39, wherein the
operational data values are provided by ~~means of~~ an embedded web server comprised in the

control ~~means~~ of the wireless controller.

41. (previously amended) The graphical user interface according to claim 39, wherein the operational data values displayed are combined with a graphical representation of a relevant production cell or part thereof.

42. (currently amended) The graphical user interface according to claim 39, wherein the operational data values displayed are arranged to be displayed upon activation of a part of the graphical representation of the relevant production cell or part thereof using a computer mouse, joystick, touch screen or similar computer display selection ~~means~~ element.

43. (currently amended) A wireless controller for carrying out at least one of controlling ~~and/or or~~ monitoring a device arranged relative a tool operatively connected to an industrial robot, the wireless controller comprising:

a wireless communication ~~means~~ module operatively connected to the tool and including a processor ~~arranged with~~ comprising communication function software ~~means for handling~~ configured to handle a wireless protocol stack for communication to and from said ~~device~~ tool, and

a control unit ~~means for carrying~~ configured to carry out at least one control function for one or more actuators of said ~~device~~ tool.